



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,998	07/30/2002	Hideki Hayashi	MTS -3326US	5820

7590 11/08/2004  
Allan Ratner  
Ratner & Prestia  
One Westlakes Berwyn Suite 301  
PO Box 980  
Valley Forge, PA 19482-0980

EXAMINER

LAVARIAS, ARNEL C

ART UNIT PAPER NUMBER

2872

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/089,998

Applicant(s)

HAYASHI ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 9/17/04, 5/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/26/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted (specifically, a certified translation of the JP 11-285810 document) under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. In view of this submission, the rejections of Claims 14-22 under 35 U.S.C. 102(a) and 103(a) in Sections 12, 15-16 of the Office Action dated 6/14/04 are respectfully withdrawn.

### ***Information Disclosure Statement***

2. The European Search Report for EP 00 96 4666, listed in the 'Non-Patent Literature Documents' section of PTO-1449, submitted 5/26/04, has been lined through, as it is not prior art in and of itself. However, the substance of the European Search Report for EP 00 96 4666 has been considered.

### ***Response to Amendment***

3. The amendments to Claim 15 in the submission dated 9/17/04 are acknowledged and accepted. In view of these amendments, the objections to Claims 15-22 in Section 9 of the Office Action dated 6/14/04 are respectfully withdrawn.

*Response to Arguments*

4. The Applicants argue that, with respect to Claim 14, Komma et al. fails to teach or reasonably suggest a convex lens, as generally recited in Claim 14, and including a luminous flux from a second light source having a wavelength different from the first light source to converge to a second optical recording medium which is thicker than the first optical information recording medium. After a review of the Komma et al. reference, the Examiner agrees, and respectfully withdraws the rejections of Claims 14-22 in Sections 11 and 19 of the Office Action dated 6/14/04.
5. Claims 14-22 are now rejected as follows.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claims 14-18, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komma et al. (U.S. Patent No. 5815293), of record, in view of Yoo et al. (JP 10-283668A).

Komma et al. discloses a convex lens (See for example Figures 4a, 4b, 5, 6, 9a, 9b, 19a, 19b, 20, 21, 27, 20-33, 37-38, 43-45, 47) for allowing luminous flux from a first light source (See for example 52, L3 in Figure 4a, 21) to converge to a first optical information recording medium having a predetermined thickness (See for example Figure

4a) and allowing luminous flux to converge to a second optical information recording medium which is thicker than the first optical information recording medium (See for example Figure 4b), characterized in that the lens comprises a central area close to the central axis of the luminous flux (See central area of 26a in Figures 4a, 4b, 6); a peripheral area far from the central axis (See 26b in Figure 4a, 4b, 6); and an intermediate area located midway between the central area and the peripheral area (See edge or grating portions of 26a in Figures 4a, 4b, 6); the luminous flux converging onto the information recording surface of the first optical information recording medium from the first light source is the luminous flux that has passed through the central area, the intermediate area, and the peripheral area; and the luminous flux converging onto the information recording surface of the second optical information recording medium from the first light source is the luminous flux that has passed through the intermediate area and the central area; and the intermediate area is provided with a diffraction grating (See Figures 4a, 4b; see also grating portions of 26a in Figures 4a, 4b, 6). Komma et al. additionally discloses the diffraction grating of the intermediate area, using diffraction light of the same order, forming luminous flux from the first light source with reduced wavefront aberration with respect to the first optical information medium and forming luminous flux from the first light source with reduced wavefront aberration with respect to the second optical information recording medium (See col. 26, line 42-col. 29, line 59); of the luminous flux converged onto the information recording surface of the second optical information recording medium from the first light source, the phase of the luminous flux that passes through the intermediate area is shifted with respect to the phase of the luminous flux that

passes through the central area by an amount less than  $2\pi$  (See col. 26, line 52-col. 27, line 8); an optical head including the convex lens and a photoreception element that receives reflected light from the first optical information recording medium or the second optical information recording medium and converts the reflected light to an electric signal (See for example Figure 21); and an optical information recording medium writing/reading apparatus that includes a circuit (See 58 in Figure 21; See also Figures 35, 36, 60, 61, 62, 64) that distinguishes the first optical information recording surface from the second information recording surface and selectively reads information from the electric signal, the apparatus converging luminous flux on either recording medium, receiving reflected light, converting the reflected light, converging the luminous flux that passed through the central area and the peripheral area of the lens onto the first optical information recording medium, and converging the luminous flux that passed through the intermediate area and the central area of the lens onto the second optical information recording medium (See Figure 21). Komma et al. lacks the luminous flux converging to the second, thicker optical information recording medium being from a second light source and having a wavelength different from the first light source. However, the use of multiple light sources, each with different light wavelength outputs, are well known in the art of optical pickups, particularly, those optical pickups used to read and write information to both CD's and DVD's. For example Yoo et al. teaches an optical pickup for reading and writing information from CD's and DVD's (See Abstract; Figure 3), wherein the optical pick includes a first source (See 31 in Figure 3) and a second optical source (See 39 in Figure 3), wherein the light output of the first source is focused onto a

thinner optical recording medium (See 37 in Figure 4) and the light output of the second source has a different wavelength than that of the first source and is focused onto a thicker optical recording medium (See 41 in Figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the luminous flux converging to the second, thicker optical information recording medium be from a second light source and having a wavelength different from the first light source, as taught by Yoo et al., in the convex lens and optical pickup of Komma et al., for the purpose of increasing recording density, particularly when the light wavelength of the second source is shorter than that of the first source (useful for higher recording densities in DVD's by using shorter wavelengths).

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komma et al. in view of Yoo et al.

Komma et al. in view of Yoo et al. discloses the invention as set forth above in Claims 14-18, except for a diffraction grating being provided in the peripheral area far from the central axis. However, Komma et al. additionally teaches a second embodiment wherein the peripheral area of the convex lens (See for example Figures 10a, 10b, 15a, 15b, 15c, 16a, 16b, 19a, 19b, 20) is also disposed with a diffraction grating (See 32 in Figures 10a, 10b, 15a, 15b). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a diffraction grating be provided in the peripheral area far from the central axis in the convex lens of Komma et al. in view of Yoo et al., to control the transmission efficiency of the lens.

Art Unit: 2872

*Conclusion*

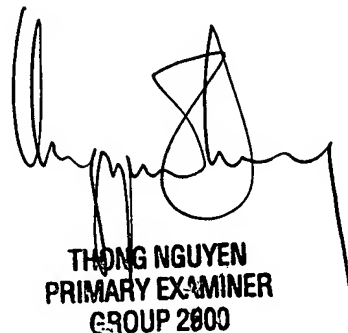
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias  
10/29/04



THONG NGUYEN  
PRIMARY EXAMINER  
GROUP 2800